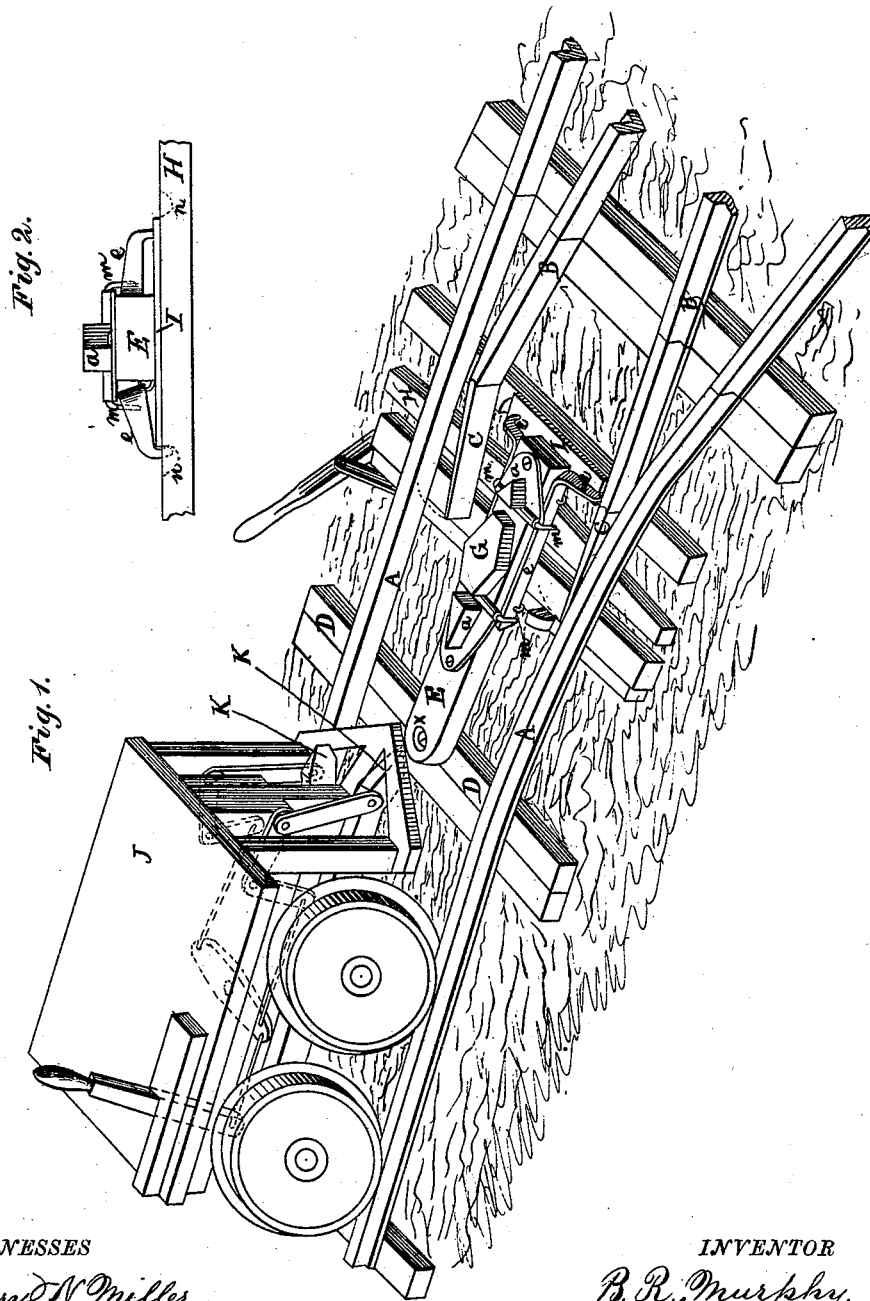


B. R. MURPHY.  
RAILROAD-SWITCH.

No. 180,364.

Patented July 25, 1876.



WITNESSES

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# UNITED STATES PATENT OFFICE.

BENJAMIN R. MURPHY, OF PARKERSBURG, WEST VIRGINIA, ASSIGNOR OF PART OF HIS RIGHT TO THOMAS MURPHY, WM. H. MCCOSH, AND D. H. LEONARD, OF SAME PLACE.

## IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. 180,364, dated July 25, 1876; application filed June 27, 1876.

*To all whom it may concern:*

Be it known that I, B. R. MURPHY, of Parkersburg, in the county of Wood and in the State of West Virginia, have invented certain new and useful Improvements in Railroad and Street-Car Switch; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of the several parts of a switch for railroad-tracks, as will be hereinafter more particularly described.

In the accompanying drawings, making part of this specification, Figure 1 represents a perspective view of the track and switch, and Fig. 2 is an end view of a portion of the operating parts.

In the figures, A and B represent the rails and switch-rails of a railroad-track. To the inner rails B B are hinged the usual guide-tongues C C for directing the cars to the switch, or to the main track, as the case may be. E represents a bar, which runs lengthwise of the track, and which is pivoted at one end, as seen at *x*, to the cross-tie D. It is adjustable or movable at the other end, being pivoted to the movable cross-piece H. The guide-tongues are also pivoted to the bar or cross-piece H, so that they move with said cross-piece when it is desirable to give direction to the cars upon the track. Secured upon this bar E are two wedge-shaped pieces, *a a*, and the double wedge-shaped block G. The wedges *a* are not secured directly to the bar E, but to plates which are pivoted to it. To the free ends of the plates are secured the rods *m m*, which have their ends bent downward upon each edge of the bar E. *ee* represent two metallic bars, which have one of their ends bent at right angles outward, and then a hook formed upon its bent end, the hook turning downward. These bars *ee* are hinged at their lower edges to bar E, and are allowed by the wires or rods *m m* to have a slight oscillating movement.

The points of the hooks of the bars *ee* catch behind the ends of a plate, I, upon a cross-tie when the switch is to be changed, so as to hold it steadily in place.

In operating this switch there are two wedges, K K, connected to suitable levers upon the engine. These wedges may be raised or lowered at the will of the engineer. By lowering one of these wedges the switch guides or tongues are operated in one direction, and by lowering the other it is operated in reverse direction.

When the wedge upon the engine strikes the wedge *a* it moves the plate to which it is secured, and causes the bent rods *m m* to slightly oscillate the bars *ee*, causing the hooks of said bars to disengage from the plate I. Passing on, it strikes the block G, which causes the bar to move, so as to close or open the guide-tongues C C.

As the wedges *a a* point both ways, it will readily be seen that the engineer may by the use of the wedges upon the locomotive throw the guide-tongues either to the right or left, and either open or close the switch, thus giving direction to the train, directing it to the main track or the switch.

Having thus fully described my invention, what I claim is—

1. The bar E, pivoted as described, and provided with the double wedge G and the wedges *a a* and bars *ee*, as and for the purpose set forth.

2. The combination of an engine or car, having the adjustable wedges K K connected to levers, of the bar E with wedges *a a*, hooked bars *ee*, plate I, block G, and the guide-tongues C C of a switch-rail, all constructed and arranged substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of June, 1876.

B. R. MURPHY.

Witnesses:

G. H. CALDWELL,  
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